

~~RE1 Sub P1~~

1. (Currently Amended) A process cartridge detachably mountable to a main assembly of an electrophotographic image forming apparatus, said process cartridge comprising:

- a cartridge frame;
- an electrophotographic photosensitive drum;
- a charging member for electrically charging said photosensitive drum;
- a developing member for developing an electrostatic latent image formed on said photosensitive drum;
- a developer accommodating portion for accommodating a developer to be used for developing the electrostatic latent image by said developing member;
- an engaging member;
- first, second, and third guide portions;
- a driving force receiving member; and
- a positioning portion;

wherein said engaging member is for being supported by a receiving portion of a movable member provided in the main assembly of the apparatus when said engaging member is in the main assembly of the apparatus, wherein said engaging member is provided on a portion of said cartridge frame which is above said second and third guide portions when said process cartridge is inserted into the main assembly of the apparatus in a longitudinal direction of said photosensitive drum, at a downstream end of said process

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cartridge in a direction of insertion of said cartridge into the main assembly of the apparatus;

wherein said first guide portion is provided on a portion of said cartridge frame which is above said second and third guide portions when said cartridge is inserted into the main assembly of the apparatus in the longitudinal direction of said photosensitive drum, downstream of said third guide portion and said positioning portion with respect to the direction of insertion of said cartridge, wherein said first guide portion is guided by a main assembly fixed guide provided in the main assembly of the apparatus when said cartridge is being inserted into the main assembly of the apparatus;

wherein said second guide portion is provided on a portion of said cartridge frame which is below said engaging member and said first guide portion when said cartridge is inserted into the main assembly of the apparatus in the longitudinal direction of said photosensitive drum, downstream of said third guide portion and said positioning portion with respect to the insertion direction of said cartridge, wherein said second guide portion is guided by a first guide recess provided in the main assembly of the apparatus when said cartridge is inserted into the main assembly of the apparatus;

wherein said third guide portion is provided on a portion of said cartridge frame which is below said engaging member and said first guide portion when said cartridge is inserted into the main assembly of the apparatus in the longitudinal direction of said photosensitive drum, upstream of said engaging member, said first and second guiding portions, and said driving force receiving member in the direction of insertion of said

*1st Guide Point*

cartridge, wherein said third guide portion is guided by a second guide recess provided in the main assembly of the apparatus when said cartridge is inserted into the main assembly of the apparatus;

wherein said driving force receiving member is provided at a downstream end of said process cartridge with respect to the direction of insertion of said cartridge, wherein said driving force receiving member receives a driving force from a driving force transmitting member provided in the main assembly of the apparatus; and

wherein said positioning portion is projected from said cartridge frame in an upstream direction with respect to the direction of insertion of said process cartridge, wherein said positioning portion is disposed coaxially with said photosensitive drum, and wherein when said engaging member supported by the receiving portion is released to permit said cartridge to be lowered to a mount position, said positioning portion is supported by a positioning recess provided in the main assembly of the apparatus, and wherein when said process cartridge is lowered to the mount position, said first guide portion has passed by said main assembly fixed guide and is not supported by said main assembly fixed guide.

2. (Currently Amended) A process cartridge according to Claim 1, wherein said second guide portion and said third guide portion are provided in a cartridge frame portion having said developer accommodating portion, and said engaging member and said first

guide portion are provided in a cartridge frame portion opposite from the cartridge frame portion having said second guide portion and said third guide portion.

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2nd  
3rd*

3. (Currently Amended) A process cartridge according to Claim 1 or 2, wherein by operating a lever provided in the main assembly of the apparatus, the movable member is lowered, and said engaging member supported by the receiving portion is released, so that said process cartridge is lowered to the mount position from the position in which it is inserted into the main assembly of the apparatus.

4. (Currently Amended) A process cartridge according to Claim 3, wherein when said process cartridge is lowered, said second guide portion is in engagement with the first guide recess, and said third guide portion is in engagement with the second guide recess, and said process cartridge is lowered by rotation about said second guide portion and said third guide portion to the mount position.

5. (Currently Amended) A process cartridge according to Claim 3, wherein said engaging member is projected upwardly beyond a top side of a cartridge frame portion of said cartridge frame and is projected in the direction of insertion beyond a leading end surface of said cartridge frame portion, wherein said leading end surface is a surface which takes a leading position when said cartridge is inserted into the main assembly of the

*Claim 5*  
*Claim 6*  
*Claim 7*  
*Claim 8*

apparatus, wherein said top side is a side which takes a top position when said cartridge is inserted into the main assembly of the apparatus.

6. (Currently Amended) A process cartridge according to Claim 5, wherein said engaging member is integrally formed with a leading end cover constituting said cartridge frame, wherein said engaging member has a cylindrical configuration, and wherein said leading end cover takes a leading end position when said cartridge is inserted into the main assembly of the apparatus.

7. (Currently Amended) A process cartridge according to Claim 3, wherein said first guide portion is projected beyond a side surface of a cartridge frame portion of said cartridge frame in a direction crossing with the direction of insertion, and said first guide portion has a horizontal projected portion which is substantially parallel with a top side of said cartridge frame portion and a downward projected portion which projects downwardly from said horizontal projected portion, said downward projected portion having a bottom end for being guided by said main assembly fixed guide provided in the main assembly.

8. (Currently Amended) A process cartridge according to Claim 7, wherein said first guide portion is integrally formed with a leading end cover and a cleaning frame which constitute said cartridge frame, wherein the leading end cover takes a leading end position when said cartridge is inserted into the main assembly of the apparatus.

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9. (Currently Amended) A process cartridge according to Claim 3, wherein said second guide portion is projected downwardly from a bottom side of a cartridge frame portion, and a leading end portion of said second guide portion is engageable with a hole provided in the main assembly of the apparatus, wherein the bottom side takes a bottom position when said cartridge is inserted into the main assembly of the apparatus.

10. (Currently Amended) A process cartridge according to Claim 9, wherein said second guide portion is formed integrally with a leading end cover constituting said cartridge frame, and wherein the leading end cover takes a leading end position when said cartridge is inserted into the main assembly of the apparatus.

11. (Currently Amended) A process cartridge according to Claim 3, wherein said third guide portion is projected downwardly from a bottom side of a cartridge frame portion, wherein the bottom side takes a bottom position when said cartridge is inserted into the main assembly of the apparatus.

12. (Currently Amended) A process cartridge according to Claim 11, wherein said third guide portion is formed integrally with a trailing end cover constituting said cartridge frame, wherein the trailing end cover takes a trailing end position when said cartridge is inserted into the main assembly of the apparatus.

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13. (Currently Amended) A process cartridge according to Claim 1, wherein a top side of said cartridge frame is provided with a first grip for being gripped when said cartridge is carried, and a trailing end portion of said cartridge frame is provided with a second grip for being gripped when said cartridge is inserted into or taken out of the main assembly of the apparatus.

14. (Currently Amended) A process cartridge according to Claim 13, further comprising a positioning member provided at a leading end side with respect to the direction of insertion of said process cartridge, said positioning member extending so as to enclose said driving force receiving member, wherein a part of said positioning member is engaged with a positioning recess provided in the main assembly of the apparatus to be correctly positioned at the mount position in the main assembly of the apparatus.

15. (Currently Amended) A process cartridge according to Claim 14, wherein said process cartridge moves from the mount position through  $100\mu - 1$  mm in a direction crossing with the direction of the insertion, when said driving force receiving member is centered relative to the driving force transmitting member by receiving the driving force from the driving force transmitting member.

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16. (Currently Amended) An electrophotographic image forming apparatus for forming an image on the recording material, to which a process cartridge is detachably mountable, said apparatus comprising:

- (a) a lever;
- (b) a movable member interrelated with said lever, said movable member having a receiving portion;
- (c) a main assembly fixed guide;
- (d) a first guide recess;
- (e) a second guide recess;
- (f) a positioning recess;
- (g) a driving force transmitting member; and
- (h) a process cartridge mounting portion for detachably mountable the process cartridge, the process cartridge including:
  - a cartridge frame;
  - an electrophotographic photosensitive drum;
  - a charging member for electrically charging the photosensitive drum;
  - a developing member for developing an electrostatic latent image formed on the photosensitive drum;
  - a developer accommodating portion for accommodating a developer to be used for developing the electrostatic latent image by the developing member;
  - first, second, and third guide portions;

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Q2  
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a driving force receiving member;  
a positioning portion; and  
an engaging member for being supported by said receiving portion of said movable member when the engaging member is in the main assembly of said apparatus, wherein the engaging member is provided on a portion of the cartridge frame which is above the second and third guide portions when the process cartridge is inserted into the main assembly of said apparatus in a longitudinal direction thereof, at a downstream end of the process cartridge in a direction of insertion of the process cartridge into the main assembly of said apparatus;

wherein the first guide portion is provided on a portion of the cartridge frame which is above the second and third guide portions when the process cartridge is inserted into the main assembly of said apparatus in the longitudinal direction of the photosensitive drum, downstream of the third guide portion and the positioning portion with respect to the direction of insertion of the process cartridge, wherein the first guide portion is guided by said main assembly fixed guide ;

wherein the second guide portion is provided on a portion of the cartridge frame which is below the engaging member and the first guide portion when the process cartridge is inserted into the main assembly of said apparatus in the longitudinal direction of the photosensitive drum, downstream of the third guide portion and the positioning portion with respect to the insertion of the process cartridge, wherein the second guide portion is

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guided by said first guide recess when the process cartridge is inserted into the main assembly of said apparatus;

wherein the third guiding portion is provided on a portion of the cartridge frame which is below the engaging member and the first guide portion when the process cartridge is inserted into the main assembly of said apparatus in the longitudinal direction of the photosensitive drum, upstream of the engaging member, the first and second guiding portions, and the driving force receiving member in the direction of insertion of the process cartridge, wherein the third guide portion is guided by said second guide recess when the process cartridge is inserted into the main assembly of said apparatus;

wherein the driving force receiving member is provided at a downstream end of the process cartridge with respect to the direction of insertion, wherein the driving force receiving member receives a driving force from said driving force transmitting member; and

wherein the positioning portion is projected from the cartridge frame in an upstream direction with respect to a direction of insertion, wherein the positioning portion is disposed coaxially with the photosensitive drum, and wherein when the engaging member supported by said receiving portion is released to permit the process cartridge to be lowered to a mount position, the positioning portion is supported by said positioning recess, and wherein when the process cartridge is lowered to the mount position, the first guide portion has passed by said main assembly fixed guide and is not supported by said main assembly fixed guide.

*17. (Currently Amended)* An apparatus according to Claim 16, wherein said main assembly fixed guide is disposed adjacent one end of said process cartridge mounting portion with respect to a direction crossing with the direction of insertion, and is extended in the direction of insertion from an inlet side for insertion of the process cartridge to said process cartridge mounting portion toward a rear side, wherein said fixed main assembly guide is provided with a recess engageable with the first guide portion.

*18. (Currently Amended)* An apparatus according to Claim 17, wherein said first guide recess and said second guide recess are disposed adjacent the other end of said process cartridge mounting portion with respect to a direction crossing with the direction of insertion, wherein said second guide recess is disposed adjacent an entrance portion of said process cartridge mounting portion, and said first guide recess is disposed at a rear side of said process cartridge mounting portion, and wherein a flat guide portion is provided between said first guide recess said second guide recess.

*19. (Currently Amended)* A cartridge mounting method for mounting a process cartridge to a main assembly of an electrophotographic image forming apparatus, said method comprising:

(a) a step of providing in the main assembly of said electrophotographic image forming apparatus, a lever,

*(1) First  
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a movable member interrelated with said lever and having a receiving portion,  
a fixed guide,  
a first guide recess,  
a second guide recess,  
a positioning recess, and  
a driving force transmitting member;

(b) a step of providing in the process cartridge,  
a cartridge frame,  
an electrophotographic photosensitive drum,  
a charging member for electrically charging the photosensitive drum,  
a developing member for developing an electrostatic latent image formed on  
the photosensitive drum,  
a developer accommodating portion for accommodating a developer to be used  
for developing the electrostatic latent image by the developing member,  
first, second, and third guide portions;  
a driving force receiving member;  
a positioning portion; and  
an engaging member for being supported by the receiving portion when the  
engaging member is in the main assembly of the apparatus, wherein the engaging member  
is provided on a portion of the cartridge frame which is above the second and third guide  
portions when the process cartridge is inserted into the main assembly of the apparatus in a

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*Self unit*

longitudinal direction thereof, at a downstream end of the process cartridge in a direction of insertion of the cartridge into the main assembly of the apparatus;

wherein the first guide portion is provided on a portion of the cartridge frame which is above the second and third guide portions when the cartridge is inserted into the main assembly of the apparatus in the longitudinal direction of the photosensitive drum, downstream of the third guide portion and the positioning portion with respect to the direction of insertion of the cartridge, wherein the first guide portion is guided by the fixed guide when the cartridge is being inserted into the main assembly of the apparatus;

wherein the second guide portion is provided on a portion of the cartridge frame which is below the engaging member and the first guide portion when the cartridge is inserted into the main assembly of the apparatus in the longitudinal direction of the photosensitive drum, downstream of the third guide portion and the positioning portion with respect to the insertion direction of the cartridge, wherein the second guide portion is guided by the first guide recess when the cartridge is inserted into the main assembly of the apparatus,

wherein the third guide portion is provided on a portion of the cartridge frame which is below the engaging member and the first guide portion when the cartridge is inserted into the main assembly of the apparatus in the longitudinal direction of the photosensitive drum, upstream of the engaging member, the first and second guiding portions, and the driving force receiving portion in the direction of insertion of the

*Cartridge*  
*Guide*  
*Mount*

cartridge, wherein the third guide portion is guided by the second guide recess when the cartridge is inserted into the main assembly of the apparatus,

wherein the driving force receiving member is provided at a downstream leading end of the process cartridge with respect to the direction of insertion, wherein the driving force receiving member receives a driving force from the driving force transmitting member, and

wherein the positioning portion is projected from the cartridge frame in an upstream direction with respect to a direction of insertion, wherein the positioning portion is disposed coaxially with the photosensitive drum, and wherein when the engaging member supported by the receiving portion is released to permit the cartridge to be lowered to a mount position, the positioning portion is supported by the positioning recess provided in the main assembly of the apparatus; and

(c) a step of inserting the process cartridge into the main assembly of the apparatus with the first guide portion being guided by the fixed guide, with the second guide portion being guided by the first guide recess, and with the second guide portion being guided by the second guide recess; causing the engaging member to be supported by the receiving portion; and thereafter, releasing, with the first guide portion having passed by the first guide and not being supported by the fixed guide, the engaging member from the receiving portion by operating the movable member, so that the cartridge is let to fall to the mount position.

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20. (Currently Amended) A cartridge mounting method according to Claim 19, further comprising the step of providing the second guide portion and the third guide portion in a cartridge frame portion having the developer accommodating portion, and providing the engaging member and the first guide portion in a cartridge frame portion opposite from the cartridge frame portion having the second guide portion and the third guide portion.

21. (Currently Amended) A cartridge mounting method according to Claim 20, further comprising the step of lowering the movable member, and releasing the engaging member supported by the receiving portion, so that the cartridge is lowered to the mount position from the position in which it is inserted into the main assembly of the apparatus in response to operating a lever provided in the main assembly of the apparatus.

22. (Currently Amended) A cartridge mounting method according to Claim 21, wherein when the cartridge is lowered, the second guide portion is in engagement with the first guide recess, and the third guide portion is in engagement with the second guide recess, and the cartridge is lowered by rotation about the second guide portion and the third guide portion to the mount position.

23. (Currently Amended) A cartridge mounting method according to Claim 19 or 20, wherein the engaging member is projected upwardly beyond a top side of a cartridge

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frame portion of the cartridge and is projected in the direction of insertion beyond a leading end surface of the cartridge frame portion, wherein the leading end surface is a surface which takes a leading position when the cartridge is inserted into the main assembly of the apparatus, wherein the top side is a side which takes a top position when the cartridge is inserted into the main assembly of the apparatus.

24. (Currently Unamended) A cartridge mounting method according to Claim 23, wherein the engaging member is integrally formed with a leading end cover constituting the cartridge frame, and wherein the engaging member has a cylindrical configuration, wherein said method further comprises the step of the leading end cover taking a leading end position when the cartridge is inserted into the main assembly of the apparatus.

25. (Currently Amended) A cartridge mounting method according to Claim 21, wherein the first guide portion is projected beyond a side surface of a cartridge frame portion of the cartridge in a direction crossing with the direction of insertion, and the first guide portion has a horizontal projected portion which is substantially parallel with a top side of the cartridge frame portion and a downward projected portion which projects downwardly from the horizontal projected portion, the downward projected portion having a bottom end for being guided by the guide fixed in the main assembly.

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26. (Currently Amended) A cartridge mounting method according to Claim 25, wherein the first guide portion is integrally formed with a leading end cover and a cleaning frame which constitute the cartridge frame, wherein said method further comprises the step of the leading end cover taking a leading end position when the cartridge is inserted into the main assembly of the apparatus.

27. (Currently Amended) A cartridge mounting method according to Claim 21, wherein the second guide portion is projected downwardly from a bottom side of a cartridge frame portion of the cartridge, and a leading end portion of the second guide portion is engageable with a hole provided in the main assembly of the apparatus, wherein the bottom side takes a bottom position when the cartridge is inserted into the main assembly of the apparatus.

28. (Currently Amended) A cartridge mounting method according to Claim 27, wherein the second guide portion is formed integrally with a leading end cover constituting the cartridge frame, wherein said method further comprises the step of the leading end cover taking a leading end position when the cartridge is inserted into the main assembly of the apparatus.

29. (Currently Amended) A cartridge mounting method according to Claim 21, wherein the third guide portion is projected downwardly from a bottom side of a cartridge

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frame portion, and wherein said method further comprises the step of the bottom side taking a bottom position when the cartridge is inserted into the main assembly of the apparatus.

30. (Currently Amended) A cartridge mounting method according to Claim 29, wherein the third guide portion is formed integrally with a trailing end cover constituting the cartridge frame, wherein said method further comprises the step of the trailing end cover taking a trailing end position when the cartridge is inserted into the main assembly of the apparatus.

31. (Currently Amended) A cartridge mounting method according to Claim 19, wherein a top side of the cartridge frame is provided with a first grip for being gripped when the cartridge is carried, and a trailing end portion of the cartridge frame is provided with a second grip for being gripped when the cartridge is inserted into or taken out of the main assembly of the apparatus.

32. (Currently Amended) A cartridge mounting method according to Claim 19, further comprising the step of providing a positioning member provided at a leading end side with respect to the direction of insertion of the process cartridge, the positioning member extending so as to enclose the driving force receiving member, wherein a part of the positioning member is engaged with the positioning recess provided in the main

*Unit*

assembly of the apparatus to be correctly positioned at the mount position in the main assembly of the apparatus.

*Unit*

33. (Currently Amended) A cartridge mounting method according to Claim 19, 25, 27, or 29, further comprising the step of moving the process cartridge from the mount position through  $100\mu$  - 1 mm in a direction crossing with the direction of the insertion, when the driving force receiving member is centered relative to the driving force transmitting member by receiving the driving force from the driving force transmitting member.

34. (Currently Amended) A cartridge mounting method according to Claim 19, wherein said the fixed guide is disposed adjacent one end of a cartridge mounting portion with respect to a direction crossing with the direction of insertion, and wherein the fixed guide is extended in the direction of insertion from an inlet side for insertion of the process cartridge to the cartridge mounting portion toward a rear side, wherein the fixed guide is provided with a recess engageable with the first guide portion.

35. (Currently Amended) A cartridge mounting method according to Claim 34, wherein the first guide recess and the second guide recess are disposed adjacent the other end of the cartridge mounting portion with respect to a direction crossing with the direction of insertion, wherein the second guide recess is disposed adjacent an entrance portion of